

FIG.1A

RELATIONSHIP BETWEEN  $N_1$  AND  $Q_1$   
IN PUMP TURBINE MODEL

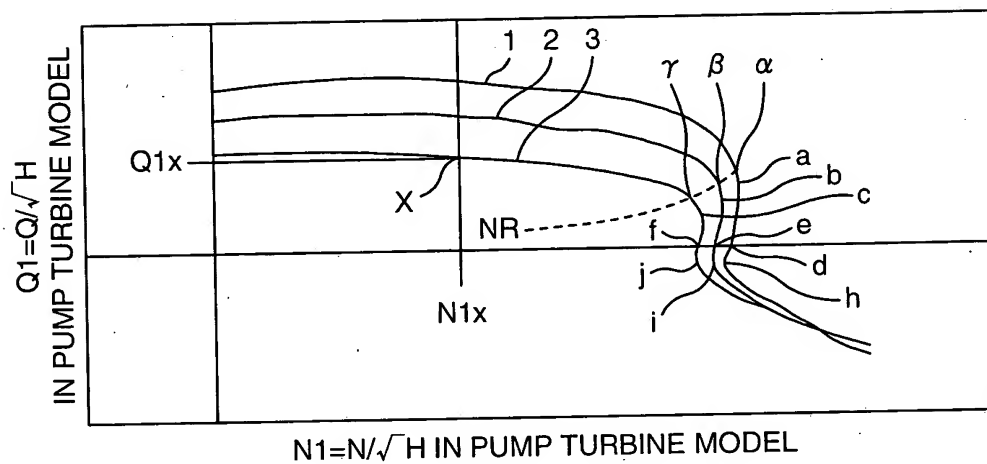


FIG.1B

RELATIONSHIP BETWEEN  $N_1$  AND  $T_1$   
IN PUMP TURBINE MODEL

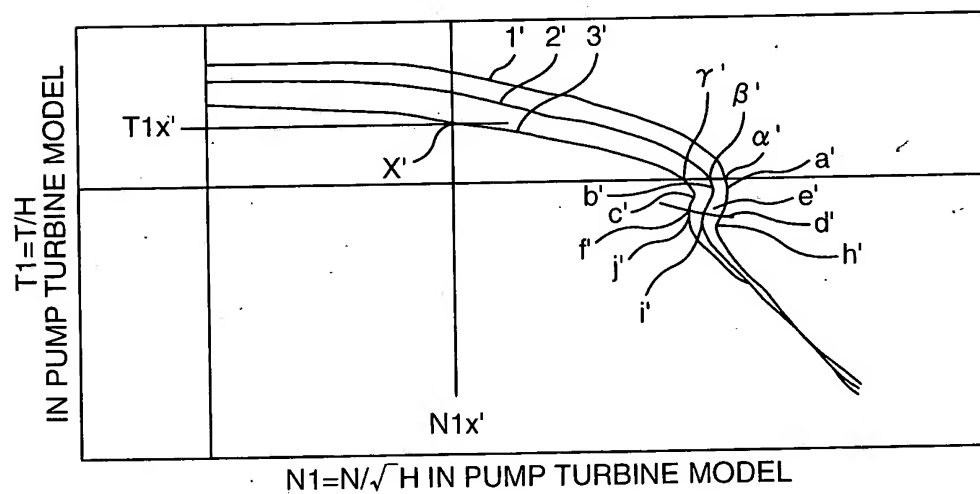
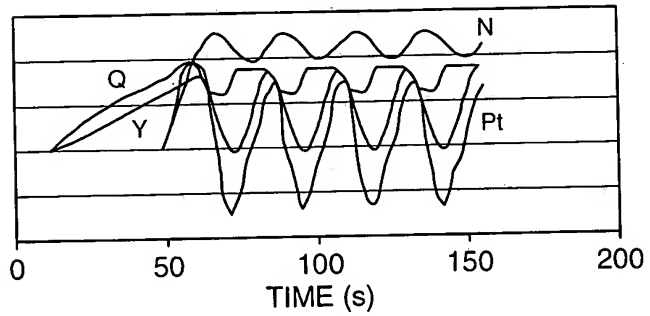
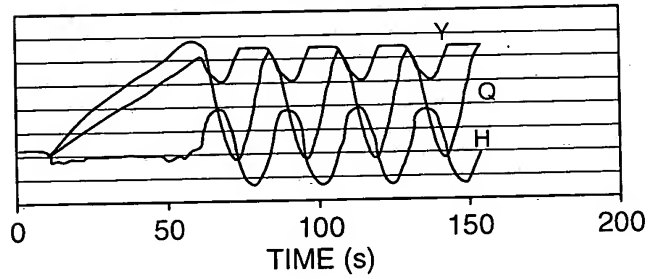


FIG.2

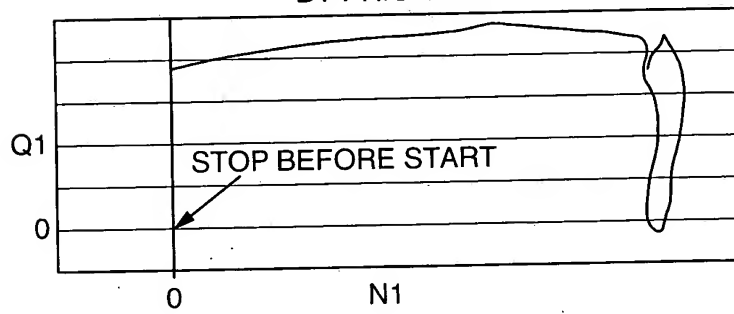
START IN S-CHARACTERISTIC PORTION  
BY PRIOR ART



START IN S-CHARACTERISTIC PORTION  
BY PRIOR ART



START IN S-CHARACTERISTIC PORTION  
BY PRIOR ART



START IN S-CHARACTERISTIC PORTION  
BY PRIOR ART

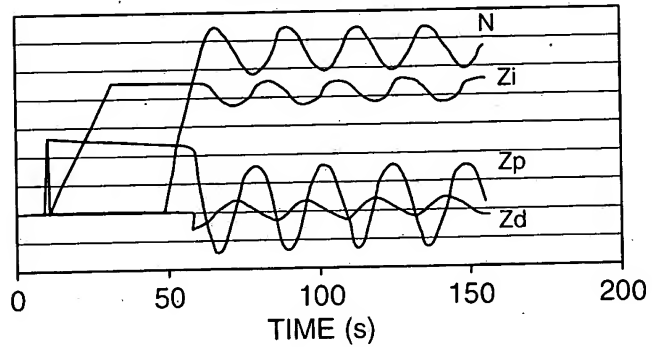


FIG.3

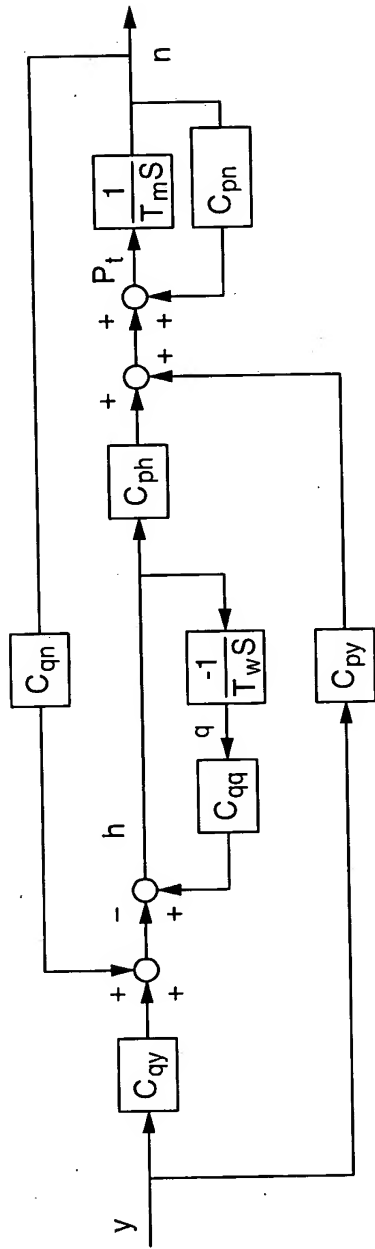


FIG.4

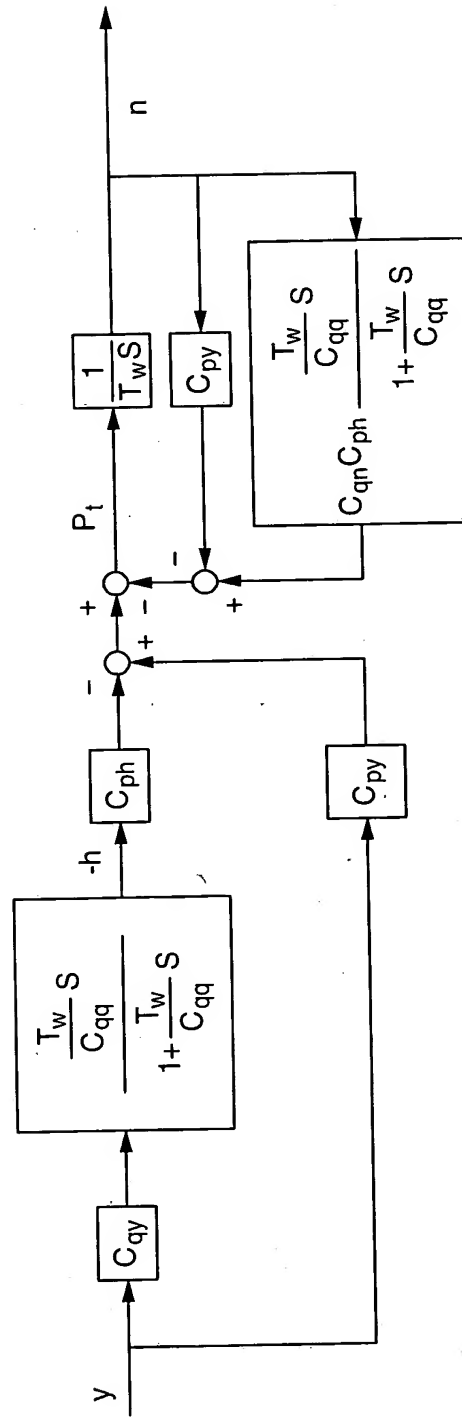


FIG.5

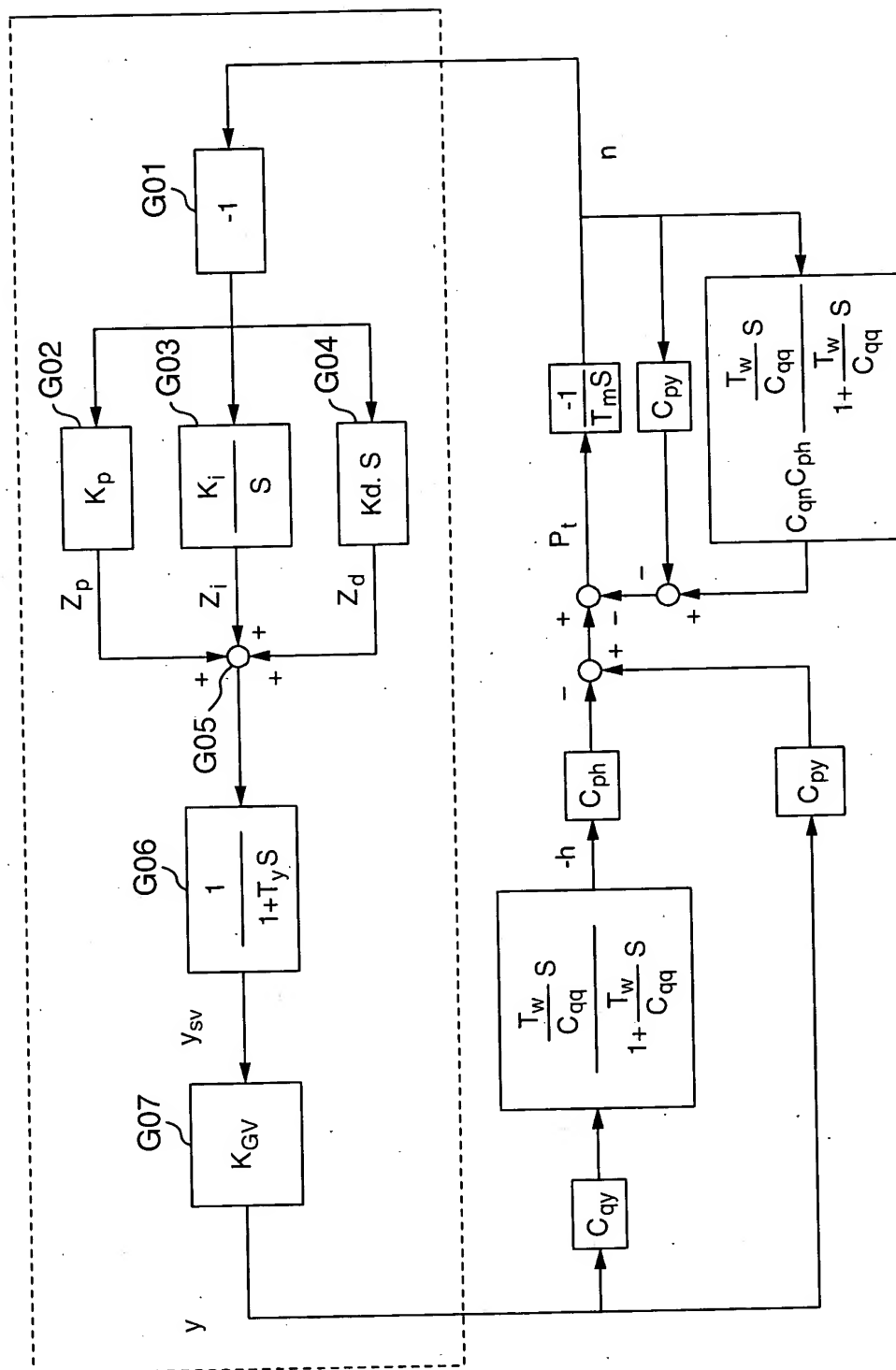


FIG.6

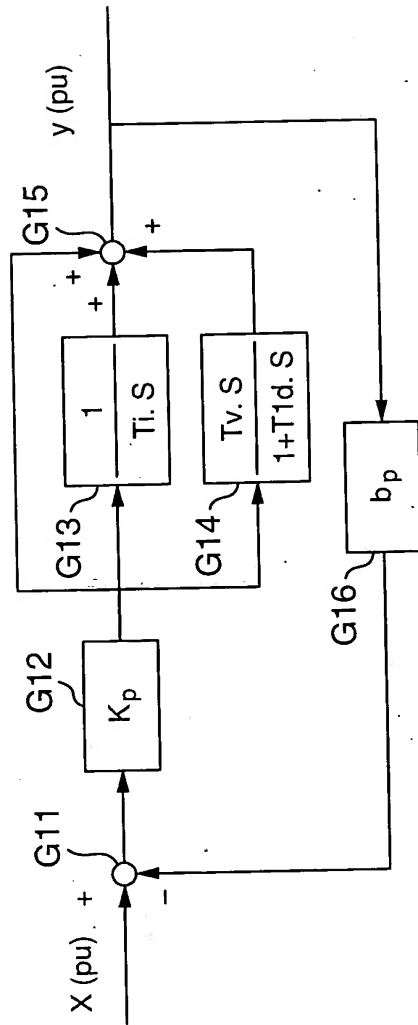
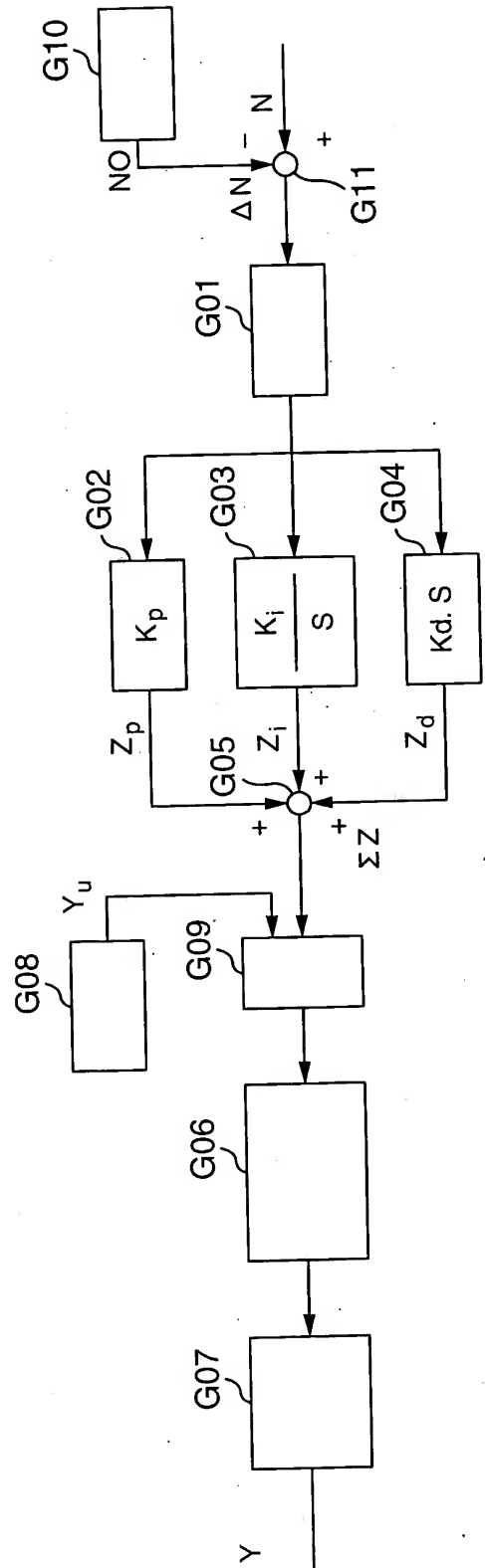
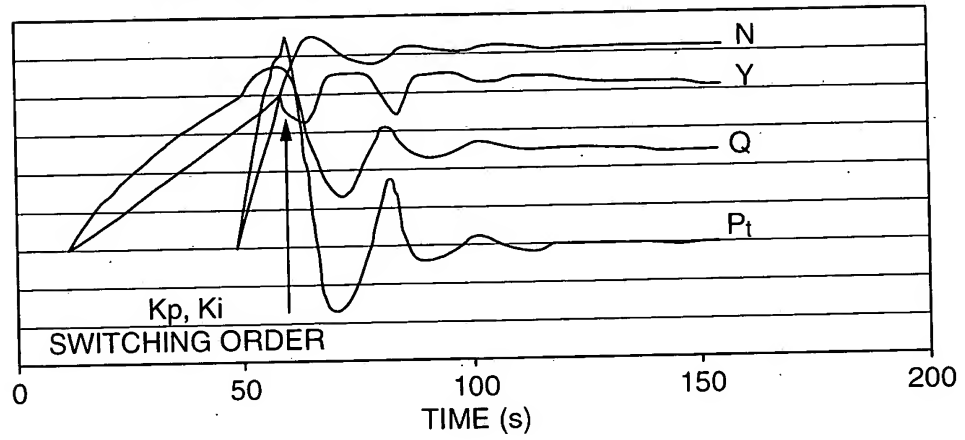


FIG.12



# FIG.7

## ANALYSIS ON EMBODIMENT OF INVENTION (1)



## ANALYSIS ON EMBODIMENT OF INVENTION (2)

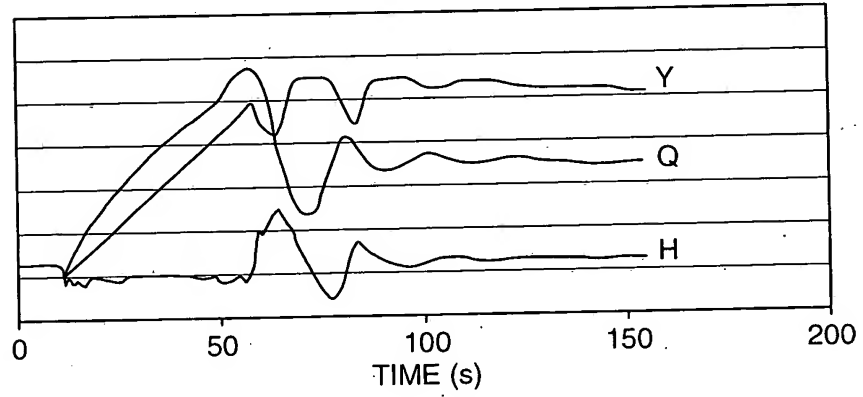
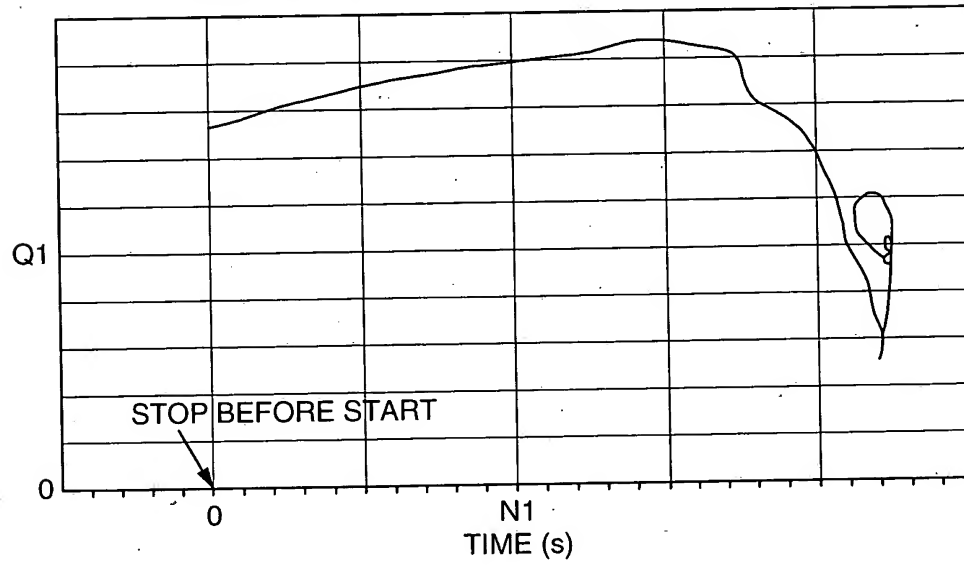


FIG.8

ANALYSIS ON EMBODIMENT OF INVENTION (3)



ANALYSIS ON EMBODIMENT OF INVENTION (4)

START ORDER

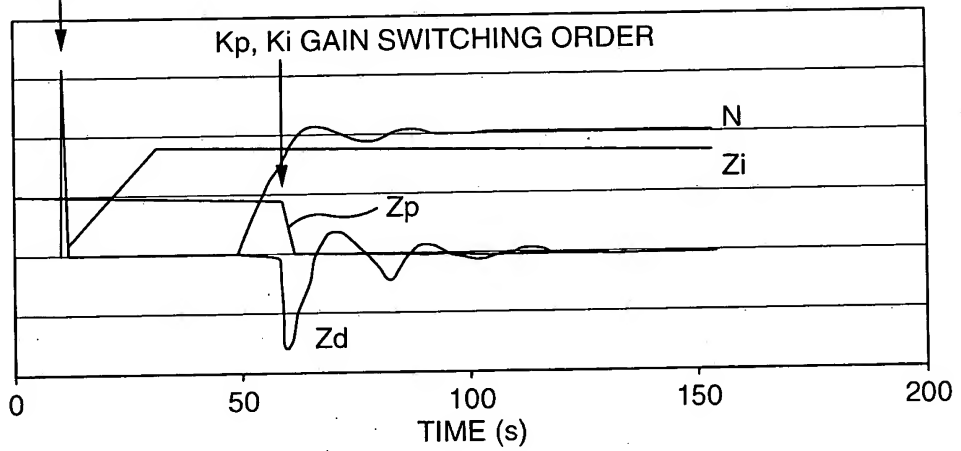


FIG.9

ANALYSIS ON EMBODIMENT OF INVENTION (5)

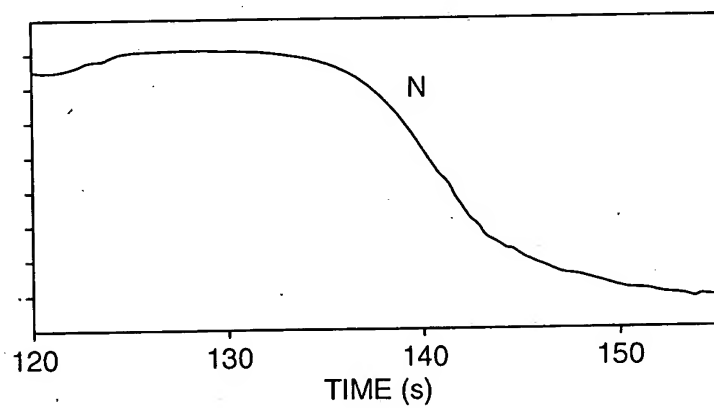
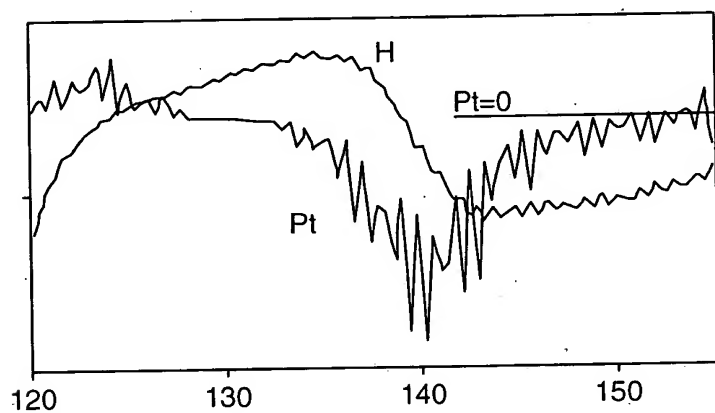
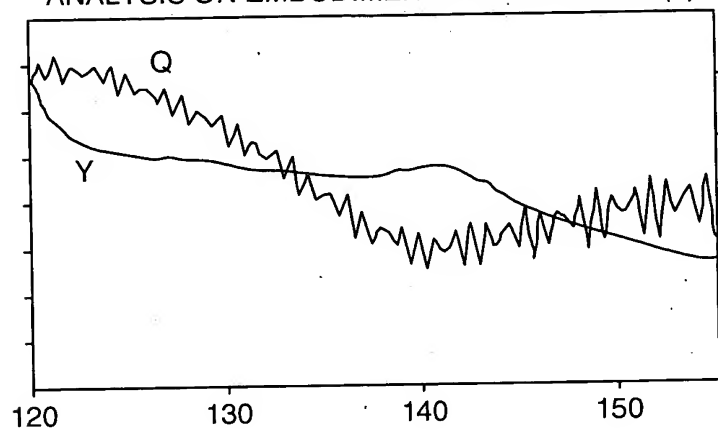




FIG.10

ANALYSIS ON EMBODIMENT OF INVENTION (6)

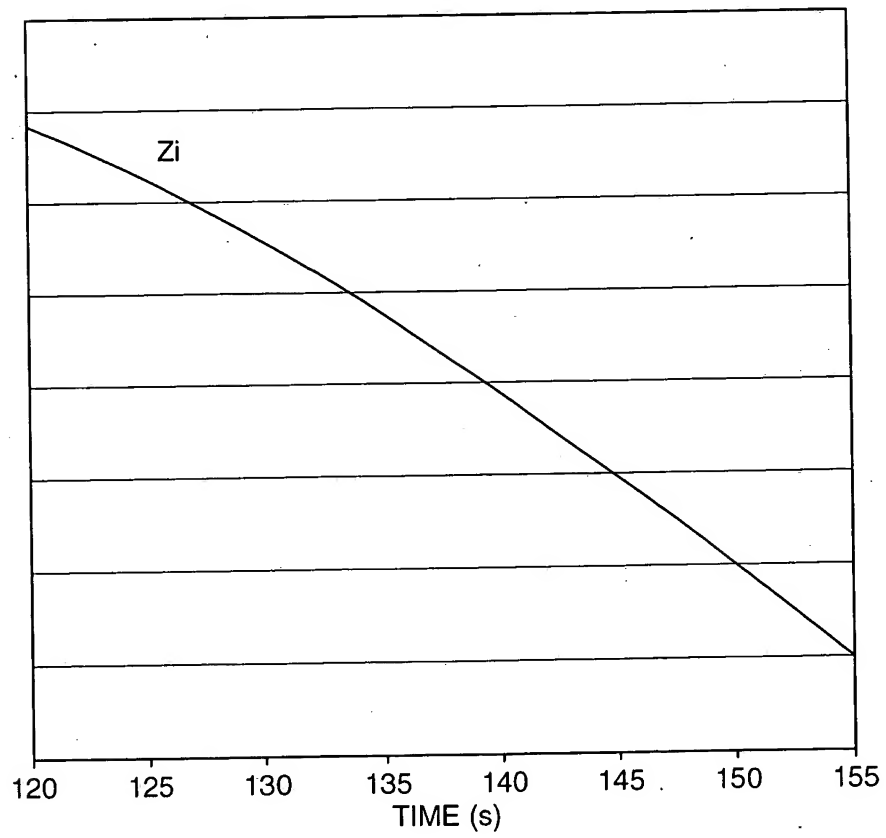
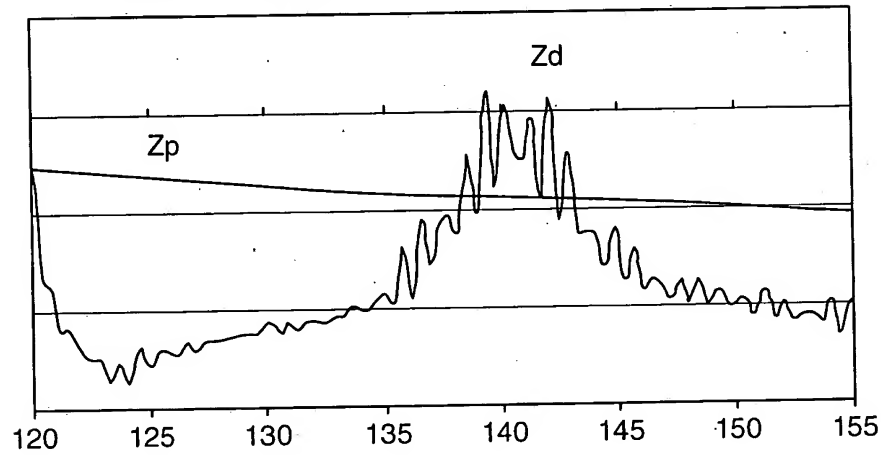
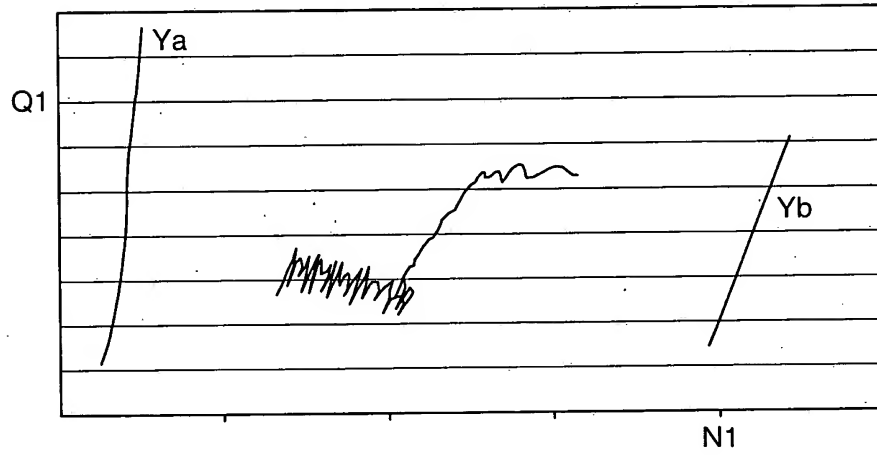


FIG.11

ANALYSIS ON EMBODIMENT OF INVENTION (7)



ANALYSIS ON EMBODIMENT OF INVENTION (8)

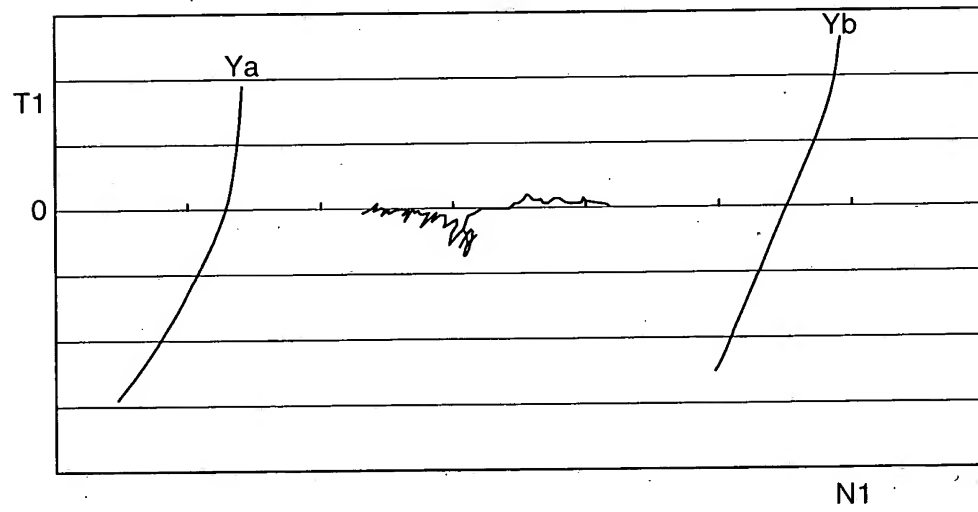


FIG.13

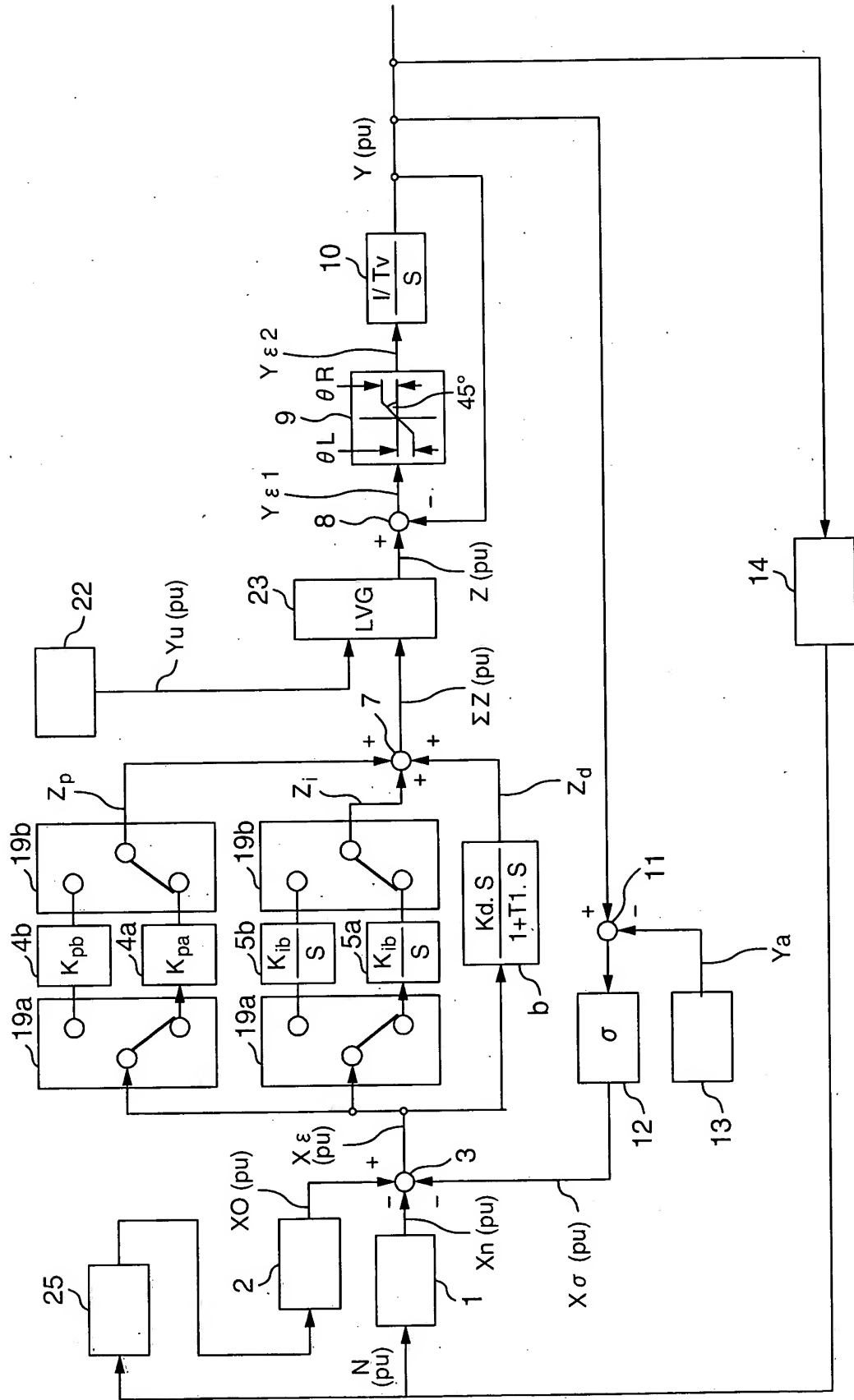


FIG.14

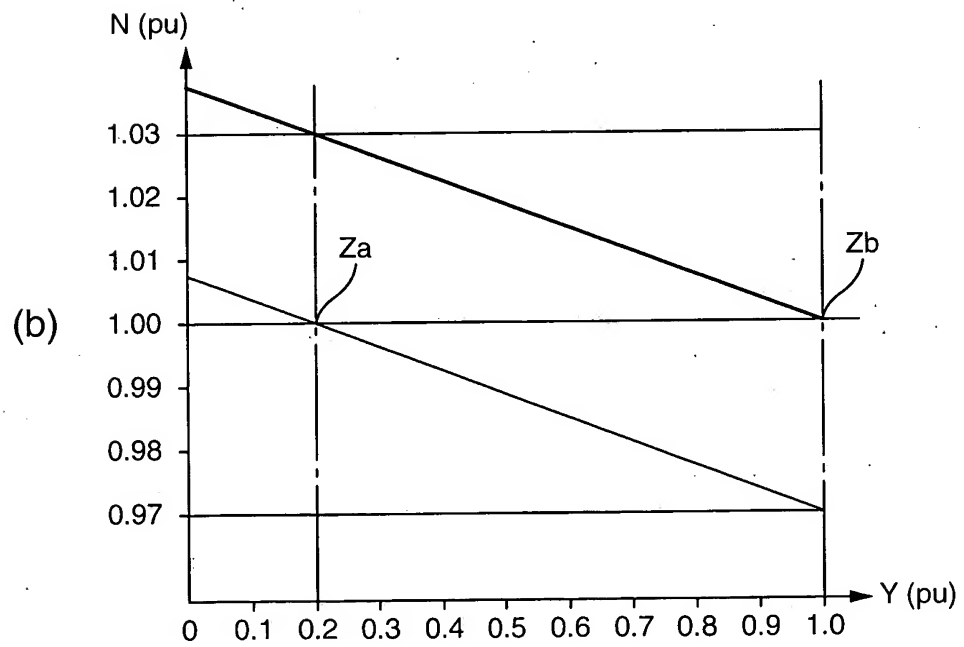
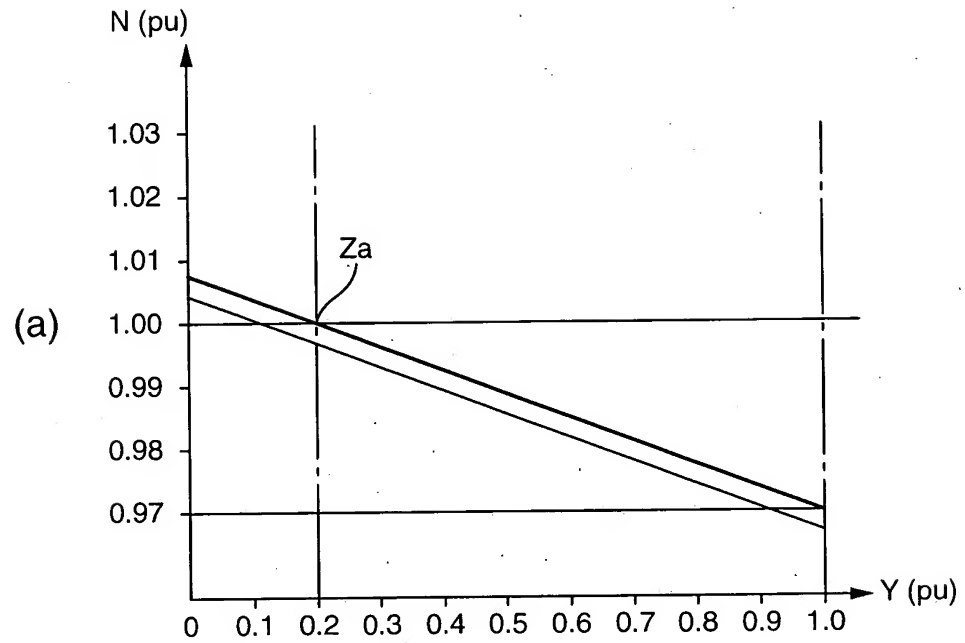


FIG.15

